PENDING CLAIMS

1. (Currently Amended) A small footprint device comprising:

   ~~a.~~ at least one processing element configured to execute groups of one or more program modules in separate contexts, objects of a program module associated with a particular context;

   ~~b.~~ memory~~;~~, and

   ~~c.~~ a context barrier for separating and isolating said contexts, said context barrier configured to use said memory to control object-oriented access of a program module executing in one context to information and/or a program module executing in another context, said context barrier further configured to prevent said access if said access is unauthorized and enable said access if said access is authorized~~, using said memory and running on said processing element, for isolating program modules from one another~~.

2-24 (Cancelled)

25. (Previously Added) The small footprint device of claim 1 in which said at least one processing element is a virtual machine running on a processor.

26. (Previously Added) The small footprint device of claim 25 in which said virtual machine runs on top of a card operating system.

27. (Cancelled)

28. (Cancelled)

29. (Currently Amended) The small footprint device of claim ~~27~~ 1 in which said context barrier allocates separate respective name spaces for each context.

30. (Previously Added) The small footprint device of claim ~~27~~ 1 in which said context barrier allocates separate respective memory spaces for each context.

31. (Previously Added) The small footprint device of claim 1 in which at least one program module comprises a plurality of applets.

32. (Previously Added) The small footprint device of claim 1 in which said context barrier enforces at least one security check on at least one of principal, object or action to prevent access from a principal in one context to an object in a different context.

33. (Cancelled)

34. (Cancelled)

35. (Currently Amended) The small footprint device of claim ~~33~~ 32 in which at least one security check is based on partial name agreement between a principal and an object.

36. (Currently Amended) The small footprint device of claim ~~33~~ 32 in which at least one security check is based on memory space agreement between a principal and an object.

37. (Currently Amended) A method of operating a small footprint device that includes a processing machine, wherein program modules are executed on the processing machine, the method comprising: ~~the step of~~

executing groups of one or more program modules in separate contexts, objects of a program module associated with a particular context; and

providing a context barrier for separating and isolating said contexts and for controlling the object-oriented access of a program module executing in one context to information and/or a program module executing in another context, said providing further comprising:

preventing said access if said access is unauthorized; and

enabling said access if said access is authorized.

~~preventing access from one program module to a different program modules using a context barrier.~~

38. (Previously Added) The method of claim 37 in which the context barrier is implemented using a virtual machine.

39. (Cancelled)

40. (Cancelled)

41. (Currently Amended) The method of claim ~~40~~ 37 in which the context barrier will not permit a principal to access an object unless both principal and object are part of the same name space.

42. (Currently Amended) The method of claim ~~39~~ 37 in which the context barrier will not permit a principal to access an object unless both principal and object are part of the same memory space.

43. (Previously Added) The method of claim 37 in which the context barrier will not permit a principal to perform an action on an object unless both principal and object are part of the same context.

44. (Previously Added) The method of claim 43 in which the context barrier will permit a principal to perform an action on an object when they are not part of the same context if the principal is authorized to perform the action on the object.

45. (Previously Added) The method of claim 44 in which the principal is authorized if it passes at least one security check.

46. (Previously Added) The method of claim 45 in which said at least one security check is one of a plurality of security checks.

47. (Previously Added) The method of claim 44 in which, if a principal in a first context is authorized to perform one or more actions on an object in a second context, when the action is performed it will execute within the second context.

48. (Previously Added) The method of claim 47 in which, when one or more actions are authorized in the second context, subsequent actions will be authorized based on executing in the second context, and a principal in the second context will be able to access objects in the second context.

49. (Previously Added) The method of claim 48 in which, when one or more actions complete in the second context, execution will return to the first context.

50. (Previously Added) The method of claim 47 in which, when action is undertaken in the second context that requires access to an object in a third context, the action will execute within the third context.

51. (Previously Added) The method of claim 50 in which switches to a new context will occur any time action is authorized on an object in a new context.

52. (Currently Amended) A computer program product, comprising:

~~a.~~ a memory medium; and

~~b.~~ a computer controlling element comprising instructions for implementing a context barrier on a small footprint device, said small footprint device comprising:

at least one processing element configured to execute groups of one or more program modules in separate contexts, objects of a program module associated with a particular context;

memory; and

a context barrier for separating and isolating said contexts, said context barrier configured to use said memory to control object-oriented access of a program module executing in one context to information and/or a program module executing in another context, said context barrier further configured to prevent said access if said access is unauthorized and enable said access if said access is authorized.

53. (Previously Added) The computer program product of claim 52 in which said memory medium is a carrier wave.

54. (Currently Amended) A computer program product, comprising:

~~a.~~ a memory medium; and

~~b.~~ a computer controlling element comprising instructions for separating a plurality of programs on a small footprint device, said small footprint device comprising:

at least one processing element configured to execute groups of one or more program modules in separate contexts, objects of a program module associated with a particular context;

memory; and

a context barrier for separating and isolating said contexts, said context barrier configured to use said memory to control object-oriented access of a program module executing in one context to information and/or a program module executing in another context, said context barrier further configured to prevent said access if said access is unauthorized and enable said access if said access is authorized ~~by running them in respective contexts~~.

55. (Previously Added) The computer program product of claim 54 in which said memory medium is a carrier wave.

56. (Currently Amended) A carrier wave carrying instructions for implementing a context barrier on a small footprint device over a communications link, said small footprint device comprising:

at least one processing element configured to execute groups of one or more program modules in separate contexts, objects of a program module associated with a particular context;

memory; and

a context barrier for separating and isolating said contexts, said context barrier configured to use said memory to control object-oriented access of a program module executing in one context to information and/or a program module executing in another context, said context barrier further configured to prevent said access if said access is unauthorized and enable said access if said access is authorized.

57. (Currently Amended) A carrier wave carrying instructions over a communications link for separating a plurality of programs on a small footprint device, said small footprint device comprising:

at least one processing element configured to execute groups of one or more program modules in separate contexts, objects of a program module associated with a particular context;

memory; and

a context barrier for separating and isolating said contexts, said context barrier configured to use said memory to control object-oriented access of a program module executing in one context to information and/or a program module executing in another context, said context barrier further configured to prevent said access if said access is unauthorized and enable said access if said access is authorized ~~by running them in respective contexts~~.

58. (Currently Amended) A method of shipping code over a network, comprising ~~the step of~~ transmitting a block of code from a server, said block of code comprising instructions over a communications link for separating a plurality of programs on a small footprint device, said small footprint device comprising:

at least one processing element configured to execute groups of one or more program modules in separate contexts, objects of a program module associated with a particular context;

memory; and

a context barrier for separating and isolating said contexts, said context barrier configured to use said memory to control object-oriented access of a program module executing in one context to information and/or a program module executing in another context, said context barrier further configured to prevent said access if said access is unauthorized and enable said access if said access is authorized ~~by running them in respective contexts~~.